

The Clinical Informatics Network (CLINT)

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The Clinical Informatics Network (*CLINT*) enables evidence-based health care (EBHC). We have developed, implemented and evaluated integrated, high-quality, point-of-care clinical information tools that can facilitate improved health practices and outcomes. Existing *CLINT* networks have been embraced by physicians, nurses and allied health professionals, attracted regional, national and international interest, and supported diverse innovations in health informatics.

The propose of *CLINT* technology and techniques is to meet burgeoning health practice (hospitals, community health centers, practitioner offices) and education (medical, nursing, allied health profession, pharmacy, veterinary and library) needs for inexpensive and flexible information systems that integrate evidence-based information tools with professional, institutional, and Internet health resources.

The *CLINT* project innovates in three domains: (1) perfection of a simple, flexible, self-updating clinician-computer interfaces for single or networked computers, (2) creation of unique, evidence-based resources, and (3) automation of data collection to monitor how users solve patient management problems.

The *CLINT* interface replaces the *Microsoft Windows* "program manager" shell with a secure, simple, trouble-free computer desktop, customizable suites of clinical information tools, context-sensitive help, and self-instructional resources. Different classes of users (e.g., medicine, nursing, physiotherapy) with different levels of experience (e.g., beginner, intermediate, advanced) see different subsets of the available tools. *CLINT* software is used to populate classes and levels with site-specific collections of commercial, institutional, and Internet-based medical resources. The *CLINT* interface simplifies secure access to multiple confidential data sets, avoiding multiple identifiers or passwords. There are practical remedies for common hassles: electronic mail optimized for communication between practitioners and consultants, automated paging, telephone and facsimile links to regional health

resources, and an Internet link for sending usage data to *CLINT* developers while receiving interface and resource updates.

Evidence-based resources include a multimedia collection of American College of Physicians' medical knowledge publications, a database of standardized summaries of the most relevant and trustworthy reports of medical research (electronic *ACP Journal Club*), *Users' Guides to the Medical Literature*, *Critically Appraised Topics*, *International Cochrane Collaboration* reviews, and a unique evidence-based informatics curriculum. Information management tips are presented at every sign-on and a multimedia "case of the week" illustrates how information tools can be used in clinical decision making. *CLINT* is integrated with a graphical electronic medical record and the library's MEDLINE database for literature searches.

During the first year of *CLINT* service at Chedoke-McMaster Hospitals, we have evaluated health practitioners' information needs, performance and satisfaction. Measured outcomes include baseline knowledge about, attitudes towards, and current practices in health informatics. The information seeking behaviors of all *CLINT* users are monitored and users are intermittently surveyed about the purpose and success of their use of a particular information tools. The *CLINT* interface and data collection system is portable and can be used to support testing of a wide variety of clinical information tools in a wide variety of settings. Usage data will be demonstrated through an executive information system developed for *CLINT*.